Nitrogen Reduction in Poole Harbour

Supplementary Planning Document

How residential and commercial development in the catchment of Poole Harbour will achieve nitrogen neutrality

Adopted by Purbeck District Council and the Borough of Poole for implementation from

1 April 2017

West Dorset District Council and North Dorset District Council

to consider adoption of the SPD later in 2017

Borough of Poole

North Dorset District Council

Purbeck District Council

West Dorset District Council

Executive summary

Poole Harbour is an outstanding natural feature on the south coast of England. It provides a resource for a variety of local businesses and port activities. The quality of the natural environment in Dorset makes it an attractive place to live, work and recreate. However, increasing nitrogen levels from sewage and agriculture are contributing to the growth of algal mats in the Harbour, restricting the growth, distribution and variety of important food available for wading birds protected under European law and smothering estuarine habitats.

The majority of nitrogen is generated from agriculture, but a proportion is generated from human sewage. To conform to the requirements of the Habitats Regulations and the Water Framework Directive, the Council's planning for a growth in population have to be certain that development has either avoided harm to European protected sites or mitigated the impact to ensure that there is no adverse effect. Avoidance is not possible in this case as the population will continue to grow. Therefore the additional nitrogen generated through sewage from new housing in the catchment of Poole Harbour will have to be mitigated. Mitigation can be 'direct' through upgrading sewage treatment works and through alternative technologies, e.g. wetlands or reedbeds; or 'indirect' by offsetting the nitrogen generated from new development by taking land out of a nitrogen intensive uses, e.g. where fertiliser is applied to crops. Mitigation measures will need to be secured over the duration over which the development is causing the effects, generally 80-125 years.

Ideally each development should be nitrogen neutral, but often this is only possible for development schemes within a wider land holding such as settlement extensions, where the mitigation will be secured through Section 106 agreements. Therefore, Councils will secure mitigation from Community Infrastructure Levy paid by development. The Councils will be responsible for (i) monitoring the amount of new development, and (ii) ensuring that CIL monies are spent on securing projects to provide nitrogen neutrality. Certain developments such as tourist accommodation and tourist attractions will require bespoke mitigation agreed with developers through Section 106 agreements.

The catchment covers five local authorities. Four of these authorities have worked closely with the Environment Agency and Natural England to put together this joint strategy. A small part of the catchment falls within East Dorset District, but as it is protected habitat where no development is planned, mitigation is not necessary.

The SPD was consulted upon from 9 October to 20 November 2015, attracting 26 comments. The feedback fed into this final version. The SPD has no timeframe and will only require an update should there be a change in strategy. It supports higher level local plan policies covering nitrogen neutrality in Poole Harbour.

The Councils will prepare an implementation and monitoring plan that is regularly updated to support this SPD. It will set out the amount of development and identify mitigation projects. This plan will be prepared in consultation with organisations and landowners in the Poole Harbour Catchment Initiative, with a shared ambition to reduce nitrogen entering Poole Harbour.

This SPD only covers how the Councils will ensure that new development is nitrogen neutral. The agricultural sector has also prepared a plan for reducing nitrogen leaching from farming. Clearly there is a need to coordinate the two implementation plans, working with landowners on joint projects that have the potential for wider benefits, such as biodiversity, water management and green infrastructure.

Contents

1. Introduction

1. Poole Harbour is a natural harbour that is designated a Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site for its nature conservation importance. The harbour is tidal and is also fed by the rivers Frome (also a SSSI) and Piddle. The catchment of Poole Harbour is illustrated by Figure 2.

2. The recent assemblage of a wide range of scientific evidence indicates that nitrogen (nitrates) in the harbour, through a process known as eutrophication, is encouraging the growth of wide spread algal mats. These mats restrict the growth, distribution and variety of important food (invertebrates) available for wading birds and affect other important features and processes. The presence of algal mats has increased since the 1960s with an expansion from Holes Bay to become widespread across the harbour.

3. Nitrates enter Poole Harbour from inflowing rivers (73%), from the sea (19%) and from direct discharges to the harbour (8%). Nitrogen entering Poole Harbour from the land comes from either a combination of widespread places known as ‘diffuse sources’, which are mainly losses from agriculture such as nitrogen fertilisers and livestock manure (85%), or from concentrated point sources such as sewage treatment works (STWs) (15%). The time it takes nitrates to reach the harbour from the source varies from very quickly where waste water is piped from STWs to very slowly where nitrates from agriculture percolate through soil into the rivers which takes an average of about 30 years to reach the harbour. In 2009 nitrogen stripping was incorporated in Poole STW reducing the nitrate concentration in the waste water entering the harbour significantly.

Figure 1: Algal mats on foreshore at Hamworthy, Poole

4. The primary legislative drivers to address the issue of nitrates in Poole Harbour are The Habitats Regulations[1] and Water Framework Directive[2]:

    - Habitats Regulations Assessments (HRAs) prepared for each Council's local plans and a few large planning applications have highlighted that the increase in population generated by new development will contribute to nitrogen entering Poole Harbour and in-combination with other plans will have an adverse effect upon the integrity of the Poole Harbour SPA/Ramsar site unless avoidance or mitigation measures are carried out. In determining planning applications the competent authorities have been mindful of their duties and secured appropriate mitigation. The HRAs recommend that the Councils prepare a policy and strategy for avoiding or, if this isn't possible, mitigating the impact upon the Poole Harbour SPA/Ramsar site. In addition any measures brought forward must show that the effects have been mitigated for the duration over which they continue to occur.

    - The Water Framework Directive defines Poole Harbour as a 'Protected Area' and is classed as having poor chemical status due to elevated nitrogen concentrations. The objective for Protected Areas is to achieve Good Ecological Status where this is technically feasible and would not result in dis-proportionate cost. For Poole Harbour, the Environment Agency and Natural England have recognised that there will be a significant time delay in achieving Good status, as historic leaching of nitrates across the catchment will take many years to be flushed through the groundwater and into the Harbour (on average 30 years across the catchment).

5. The Environment Agency and Natural England published a nutrient management plan (NMP), entitled the 'Strategy for Managing Nitrogen in the Poole Harbour Catchment To 2035' (June 2013)[3]. The NMP provides the most comprehensive and up to date scientific knowledge and understanding of the complex underlying processes causing eutrophication. The NMP also sets out different options for reducing nutrients entering Poole Harbour in a sustainable and considered manner. The NMP is flexible in its approach, considering measures across the whole harbour catchment. It recommends that the representatives of the agricultural sector prepare a plan for reducing the impact of nitrates from agriculture. It also recommends that the local planning authorities that share the catchment prepare a plan to ensure that future residential development is nitrogen neutral.

6. This supplementary planning document (SPD) is that plan, providing additional policy context to the following Local Plan policies[4]:

    - North Dorset Local Plan Part 1 (2016) - Policy 4:The Natural Environment
    - Poole Core Strategy (2009) - Policy PCS29: Poole Harbour SPA and Ramsar Site;
    - Purbeck Local Plan Part 1: Planning Purbeck's Future (2012) - Policy PH: Poole Harbour; and

1 The Conservation of Habitats and Species Regulations 2010

2 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003

3 http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/research/library/publications/148450.aspx

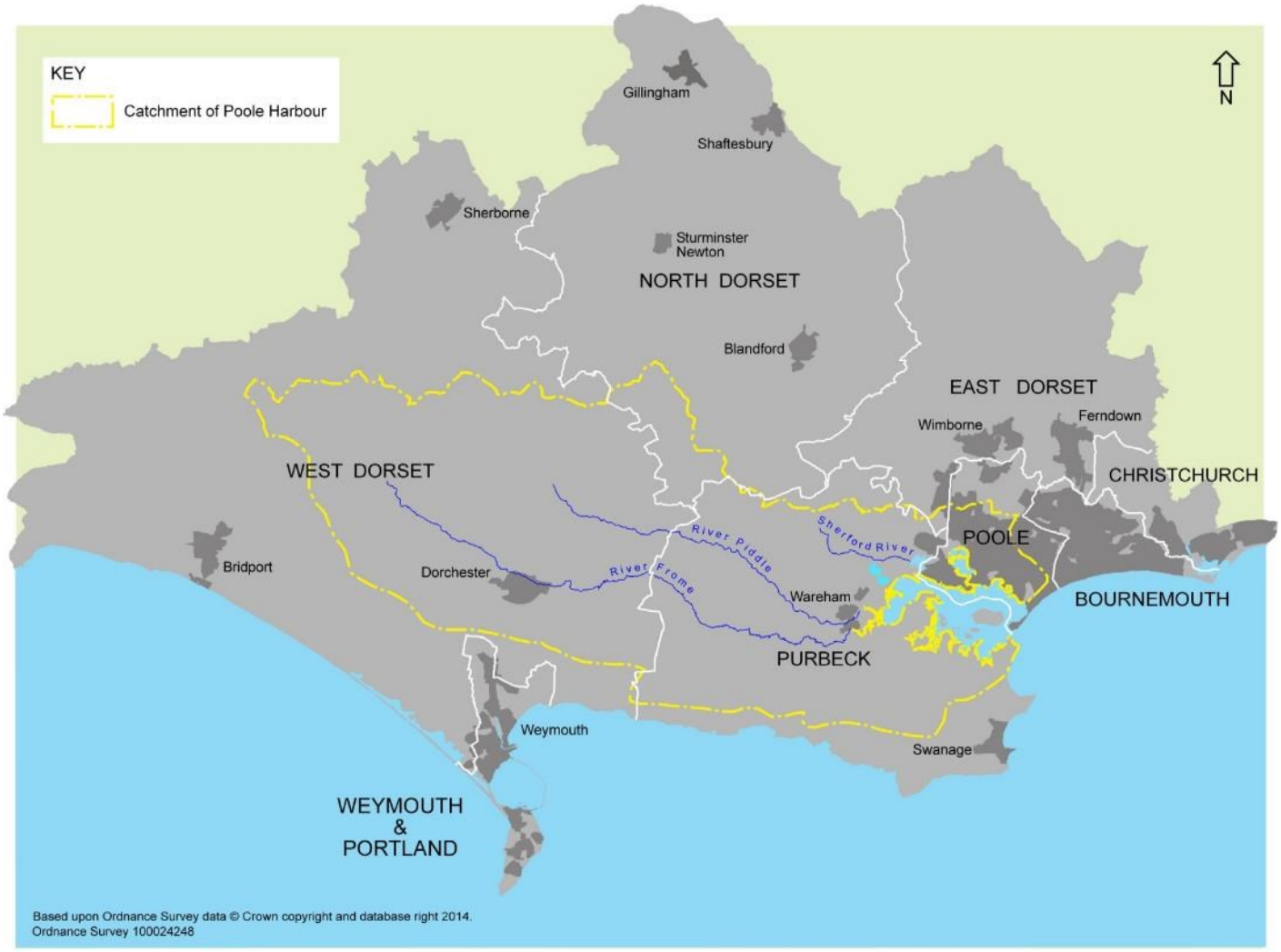
4 Or relevant policy in a local plan updated since this SPD was prepared

- West Dorset, Weymouth & Portland Local Plan (2015) – Policy ENV2: Wildlife & Habitats.

In addition there are relevant linkages with the following local plans:

- Dorset Waste Plan (emerging) – Proposed Policy 10: Sewage treatment works
- Bournemouth, Dorset and Poole Minerals Strategy (2014) - Policy RS1 Restoration, Aftercare and Afteruse of Minerals Development

Figure 2: Catchment of Poole Harbour



[Note – a more detailed plan can be accessed from the webpage where this SPD is located]

2. Nitrogen generated by development

New development within the catchment of Poole Harbour

7. For simplicity this SPD makes the assumption that anyone living in the catchment also works and uses facilities in the catchment, and therefore any sewage generated by that person can be calculated using the number of new homes built. This removes the potential for double counting of human waste water arising from different planning uses[5]. There are exceptions, such as tourism attractions and tourism accommodation that attract people into the catchment and are therefore dealt with differently.

8. On average each person produces sewage containing 0.0035 tonnes of nitrogen per year (3.5 kilograms)[6]. Assuming this population growth occurs in catchments that feed STWs which meet Urban Waste Water Treatment Directive criteria, Wessex Water who manage the STWs, is required[7] to remove 75% of nitrogen from waste water.

9. The local authorities are required under the Habitats Regulations to avoid harm to the specially protected sites at Poole Harbour. This means those bringing forward plans or projects (e.g. residential development) for consideration must provide mitigation for the additional 25% of the nitrogen entering Poole Harbour from new development that Wessex Water is not required to remove. This residual amount is 0.000875 tonnes of nitrogen per person per year.

10. To calculate the amount of nitrogen generated by new development:

    (i) Calculate household occupancy – multiply the proposed number of homes by 2.42 people per house or 1.65 people per flat; and

    (ii) Multiply the total from (i) by 0.000875 tonnes of nitrogen per person per year.

Example: A scheme of 100 homes (60 houses and 40 flats)

(i) 60 houses x 2.42 = 145 people
40 flats x 1.65 = 66 people
Total occupancy = 211 people

211 people x 0.000875 = 0.185 tonnes of nitrogen per year for the development

[5] Acknowledge that people who live within the catchment but work outside it and vice versa. The assumption provides a practical approach and assumes a worst case scenario, the precautionary principle as required for assessing effects on SPA.

[6] AMEC Cumulative Nitrogen and Phosphorus Loading to Groundwater Final Report (22 Nov 2010) Table 7.1 page 36 & 37

[7] Urban Waste Water Treatment Regulations 1994 (Section 5(3))

3. Options for mitigation

11. The mitigation can be achieved either directly or indirectly. The options available are:

Type	Options
Direct	Improve / introduce nitrogen stripping at Sewage Treatment Works
Direct	Technologies to remove nitrogen, such as reed beds and wetlands
Indirect	Changing agricultural land from high nitrogen input to low input

Direct mitigation

12. One option is to improve nitrogen stripping at STWs so that Wessex Water can remove more than its 75% requirement. Poole STW already has a nitrogen stripping facility and this technology could be installed in other STWs. However, this is a costly option. Installation and operation are expensive and the technology generates a significant amount of carbon dioxide.

13. New technology is being developed that could be installed within new developments to remove nitrogen such as reed beds and wetlands. It may be that applicants with large scale development sites are able to propose bespoke solutions which are appropriate but are specific to their proposal. These will be considered by the Councils with advice from the Environment Agency and Natural England on a case by case basis.

Indirect mitigation

14. The alternative is to offset the impact. This can be achieved by converting high nitrogen input land uses (crops and managed grassland) to low input uses (woodland, rough grazing). Any change in land use will be guided by the relevant environmental policies and strategies, e.g. landscape character assessments.

15. To calculate the amount of land required to offset the development the following conversion rates can be used[8]:

    - Change of use of land from high input use to low input use (e.g. plant a maize field with woodland) = A reduction of 0.0298 tonnes of nitrogen per hectare per year.
    - Change of use of land from high input use to urban development (e.g. a settlement extension with houses replacing a maize field) = A reduction of 0.0214 tonnes of nitrogen per hectare per year.[9]

Example: A scheme of 100 homes (60 houses and 40 flats)

Generates 0.185 tonnes of nitrogen per year for the development

0.185 divided by 0.0298 = 6.2 hectares of land

Therefore, the development of 100 homes can be mitigated through the change in management of 6.2 hectares of land from high input uses to low input uses

[8] As recommended by Natural England and the Environment Agency

[9] Note the amount of land occupied by the development should be subtracted from the amount of land needed for mitigation (as in the example presented in Appendix 1)

Perpetuity

16. In terms of complying with the Habitats Regulations, mitigation has to be in place for the same period of time as the effect which is arising. For new residential dwellings, occupation of the new dwelling will be in perpetuity, which planning law has defined as either 80 or 120 years. The Council, acting as a competent authority in approving mitigation must be certain that the mitigation will still be effective and secured for the duration of the impact, effectively for a period of 80 or 120 years. The Councils can secure mitigation through conditions on a planning permission or the use of covenants on land in their ownership.

17. Mitigation in the form of woodland planting generally has a similar life time and is straight forward for the Council to monitor and ensure that the landowner is complying with the condition/covenant. It is less easy to monitor and secure mitigation where there is a management agreement to reduce an application of nitrogen, where the changes may not be visibly apparent and hence uncertain.

18. The last few years have seen a surge in planning applications for ground-mounted solar panels in agricultural fields, potentially reducing agricultural nitrogen inputs. Planning permission for these schemes is generally granted for a 25-30 year period. It is not known what will happen beyond this time period, and a change in market value or other factors may mean that panels are removed earlier. There is therefore no certainty that these types of development will endure for 80-120 years and so they cannot be included as mitigation, despite the fact that the land is no longer being used for high input uses. However, the presence of operational solar farms could provide a form of frontloading of mitigation where they act as a buffer in the short term before permanent mitigation is delivered. The Councils will need to confirm the operational status of the solar farms and actual extent. This may be a useful approach to allow time for development of new technologies.

4. The role of the local authority

19. Each Council is the competent authority under the Habitats Regulations, responsible for decision making. To grant planning permission for new development that could generate nitrates through waste water each Council has to be certain that mitigation of any adverse effects upon Poole Harbour is effective and can be secured. Councils will do this by monitoring how much housing is being built and ensuring that sufficient mitigation is in place prior to the grant of planning permission. How this is done this will vary depending upon the approach taken by each Council.

20. Development can provide mitigation through either Community Infrastructure Levy (CIL) or a Section 106 Agreement alongside a planning permission[10].

Using Community Infrastructure Levy (CIL)

21. CIL is taxation upon development to contribute to the costs of infrastructure. Improvements to sewage treatment works, alternative technologies and offsetting through a change of the use of agricultural land are infrastructure. It is anticipated that the majority of infill/windfall development requiring mitigation will pay CIL, and the Councils will use the CIL to deliver the mitigation for those developments[11].

22. Some developments though may be exempt from paying CIL, such as affordable housing and self-build developments, or zero rated for CIL such as tourism accommodation in some local authority areas[12]. As such, where these are small scale infill type developments they will be unable to contribute to nitrogen neutrality, but can still be permitted. It becomes the responsibility of the Councils to ensure that this development is mitigated and delivers the necessary amount of mitigation from the overall CIL receipts.

Using Section 106 agreements (S106)

23. In some circumstances the Councils may require a developer to enter into a Section 106 agreement for all or part of a scheme to secure the requisite mitigation as part of the grant of planning permission. These circumstances are likely to be for:

    - Strategic housing sites / settlement extensions that are required by policy to be nitrogen neutral; and
    - Schemes that are zero rated for CIL (tourism accommodation or tourist attractions)

24. Legislation dictates that each Council cannot pool Section 106 agreements from five or more projects, which limits the application of this approach (unlike CIL). Each Council will set out clearly its infrastructure requirements (Regulation 123 List) to ensure that there is no perceived ‘double dipping’ where a developer pays twice for a scheme through a Section 106 agreement and by paying CIL.

25. Each development subject to a Section 106 agreement will have to show how the specific development is nitrogen neutral and avoids any adverse harm on Poole Harbour through the provision of mitigation in perpetuity. Nitrogen neutrality can be calculated using the examples

[10] Mitigation would also be required by either of these means if development was carried out under a Neighbourhood Development Order.
[11] North Dorset will introduce CIL in Summer 2017
[12] Some of the 4 local authorities charge CIL for tourism accommodation some don’t.

set out in Appendix 1. Alternatively developers can propose bespoke schemes that achieve nitrogen neutrality. It is likely that each Council's approach will be different and will be dealt with on a case by case basis. For example, Purbeck District Council will require developers, in the first instance, where it will not impact adversely on other policy requirements, to consider alternative technologies to provide direct mitigation of the development, thereby minimising agricultural land take. Any proposed departure from this approach will have to be supported by robust evidence.

Delivering the mitigation

26. This SPD will be supported by a monitoring and implementation plan, updated regularly, that sets out how much mitigation is required and how it has been or will be secured. It is critical that sufficient mitigation (direct or indirect) is planned to come forward in the catchment to meet the expected delivery of housing. In extreme circumstances the local authorities may have to refuse planning applications for new housing development until such a time as adequate mitigation has been provided.

27. The agricultural sector is already implementing projects and measures to reduce nitrogen leaching. The monitoring and implementation plan will be prepared in consultation with the Poole Harbour Catchment Initiative, a partnership of organisations and landowners/farmers with an interest in reducing nitrogen entering Poole Harbour. This will ensure that there is a co-ordinated approach to the delivery of mitigation projects that can achieve wider benefits, such as improved biodiversity, water management and green infrastructure. Landowners will play an important role in identifying land that could be used to help mitigate development in addition to their own contributions to reducing nitrates from farming.

28. It will be the responsibility of each Council to ensure that a suitable proportion of the total income from CIL (and any Section 106 monies[13]) during a financial year is spent on securing the necessary mitigation. This mitigation will be top sliced from the overall CIL monies to ensure that mitigation is prioritised. The mitigation can be delivered anywhere within the catchment and the Councils can work together to ensure appropriate delivery. The mitigation needs to be provided before the new development is occupied and remain in perpetuity.

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[13] No more than five S106 agreements can be pooled and used for one infrastructure project

Appendix 1: Examples of S106 calculations

The following four examples set out different scenarios for calculating mitigation to ensure a development is nitrogen neutral.

Example A: Settlement extension

This example is for a 1000 houses in a settlement extension on agricultural land with 30 hectare Suitable Alternative Natural Greenspaces (SANGs) also on agricultural land:

(Note – this is a worked example for illustrative purposes only, relating to nitrogen neutrality rather than any consideration of SANG provision. The yellow boxes require an input by the developer)

		Multiplier	Sub/Totals
1. Population	Dwellings		
Number of dwellings multiplied by 2.42 additional people per dwelling	1000	x 2.42	= 2,420
2. Amount of nitrogen produced by the development:		25% load (tonnes/ person/year)	Total nitrate load (tonnes/year)
Estimated population of development multiplied by 25% of a person's average annual production of nitrates in sewage[14]	2,420	x 0.000875	**= 2.1175**
3. Planned land use changes:		Nitrate change (tonnes/ha/year)	Net change in nitrate (tonnes/year)
Calculate a credit where a development can provide its own mitigation:	Hectares		
Site area changing from agriculture to urban (the housing)	30	x 0.0214	= 0.642
Site area changing from agriculture to low input uses (the SANGs)	30	x 0.0298	= 0.894
	Subtotal		**= 1.536**
4. Total amount of nitrogen produced by population growth minus planned land use change			Net change in nitrate (tonnes/year)
Row 2 minus Row 3	2.1175– 1.536		**= 0.5815**
5. Amount of land required to offset the nitrogen produced:		Nitrate change (tonnes/ha/year)	Land required (ha)
Row 4 divided by net change in nitrates for conversion of agricultural land to low input uses	0.5815	/ 0.0298	**= 19.51**

The example shows that the projected population of 1000 houses is 2,420 people. As 75% of the nitrogen will be removed at the sewage treatment works, the development will have to find mitigation to cover the other 25%, which is calculated at 0.000875 tonnes per person per year. The total nitrogen load of the development is 2.1175 tonnes per year. The scheme gets a credit for already taking some land out of agricultural use. Firstly the housing will replace 30 hectares of agricultural land and secondly the accompanying 30 hectare SANGs will also replace agricultural land. Combined, the housing development and the SANGs generate a credit of 1.536 tonnes per year. This leaves 0.5815 tonnes a year that requires mitigation which equates to 19.51 hectares of additional offsetting required.

The developer has four choices for the Section 106 agreement[15]; (i) to provide alternative technologies to remove the remaining nitrogen; or (ii) increase the size of the SANGs by 19.51 hectares of agricultural land; or (iii) to agree with the Council a change to the management of 19.51 hectares of agricultural land in the wider landholding in perpetuity; or (iv) purchase 19.51 hectares of agricultural land elsewhere within the catchment and use it for mitigation.

[14] 25% of a person's annual average nitrogen production through sewage. Water company responsible for remaining 75% of nitrogen.

[15] In Purbeck, alternative technologies should be considered as set out in paragraph 25.

Example B: Serviced tourist accommodation

If the Council does not charge CIL for serviced tourist accommodation, the developer may be required to calculate the mitigation required to ensure the development is nitrogen neutral. The mitigation will be secured through a Section 106 agreement.

The assumption is that anyone staying in serviced tourist accommodation is visiting from outside of the Poole Harbour catchment, and the impact of these visits through the generation of additional sewage and consequential nitrate loading, must therefore be mitigated. Serviced accommodation includes hotels, guest houses, bed and breakfasts and self catering holiday chalets and static caravan sites. Evidence[16] points to an average occupancy rate for the South West of 60% of days of the year over the period 2010-13. Therefore mitigation is only required for this period of time.

The following example is for a 60 room hotel, and assumes 3 beds per room (180 beds). Mitigation should be calculated on the assumption that all beds are occupied, and then 40% deducted for the time unoccupied.

		Multiplier	Sub/Totals
1. Population	Beds		
Total number of beds	180		180 beds
2. Amount of nitrogen produced by population growth in catchment: Estimated population of development multiplied by 25% of a person's average annual production of nitrates in sewage	180 beds	25% load (tonnes/ person/year) x 0.000875	Total nitrate load (tonnes/year) **= 0.1575**
3. Reduction for 60% seasonal occupancy Assumes 60% occupancy over the year	0.1575	X 0.6	Total nitrate load (tonnes/year) 0.0945
4. Amount of land required to offset the nitrogen produced: Row 2 divided by net change in nitrates for conversion of agricultural land to low input uses	0.0945	Nitrate change (tonnes/ha/year) / 0.0298	Land required (ha) **= 3.17**

In this example, the development will produce 0.1575 tonnes of nitrogen per year, which equates to around 3.17 hectares of offsetting.

The developer has three choices for the Section 106 agreement[17]; (i) to provide alternative technologies to remove the nitrogen; or (ii) purchase 3.17ha of agricultural land elsewhere within the catchment and use it for suitable mitigation in perpetuity; or (iii) agree with the Council to provide a payment for the equivalent of 3.17ha of agricultural land and the cost of planting trees.

16 http://www.visitengland.org/Images/December%20%20EOS%20Newsletter_tcm30-40722.pdf

17 In Purbeck, alternative technologies must be used in order to minimise agricultural land take, unless the developer can provide robust evidence ruling out the use of alternative technologies.

Example C: Tourist attractions

As with tourist accommodation above, visitors to attractions will include people from outside of the catchment. It is likely that this form of development will not be CIL liable and the Council would be likely to use a Section 106 agreement to ensure that the development is nitrogen neutral.

The calculation is different to the other examples as it is based upon trips per day, and it discounts visitors who live within the catchment (to avoid any double counting). For ease of calculation the assumption is that each visitor will use the toilet once during their visit, regardless of the length of their visit in that day. Each scheme will have to be dealt with on its own merits.

The following example is for a tourist attraction that estimates 25,000 visitors per year. It assumes that 70% of visitors come from outside of the catchment.

		Multiplier	Sub/Totals
1. Expected total visits to attraction per year	Visits		Annual visits
	25,000		= 25,000
2. Less visits of people who live within the catchment		70% out of area	Annual visitors out of area
	25,000	0.7%	= 17,500
3. Visits per day		Days of year	Daily visitors
Assume people visit once a year and use the toilet once per trip	17,500	/ 365	47.94
4. Amount of nitrogen produced by the visits:			
Estimated daily visitors multiplied by 25% of a person's average annual production of nitrates in sewage	47.94 visitors	25% load (tonnes/ person/year) x 0.000875	Total nitrate load (tonnes/year) **= 0.0419**
5. Planned land use changes:	Hectares	Nitrate change (tonnes/ha/year)	Net change in nitrate (tonnes/year)
Site area changing from agriculture to urban (e.g. visitor centre)	0.1	x 0.0214	= 0.0021
Site area changing from agriculture to low input uses	1	x 0.0298	= 0.0298
	Subtotal		**= 0.0319**
6. Total amount of nitrogen produced by the visits minus planned land use change:			Net change in nitrate (tonnes/year)
Row 4 minus row 5	0.0419 – 0.0319		= 0.01
7. Amount of land required to offset the nitrogen produced:		Nitrate change	Land required
Row 6 divided by net change in nitrates for conversion of agricultural land to low input uses	0.01	(tonnes/ha/year) / 0.0298	(ha) **= 0.336**

In this example, the attraction expects 17,500 visits a year from people who live outside of the Poole Harbour catchment. This equates to 47.94 daily visits. The attraction is taking land out of agricultural use for the visitor building (0.1ha) and associated land (1ha), which is discounted from the mitigation, leaving a requirement to provide 0.336ha of mitigation land.

The developer has three choices through Section 106 agreement[18]; (i) to provide alternative technologies to remove the nitrogen; or (ii) purchase 0.336ha of agricultural land elsewhere within the catchment and use it for suitable mitigation in perpetuity; or (iii) agree with the Council to provide a payment for the equivalent of 0.336ha of agricultural land and the cost of planting trees.

[18] In Purbeck, alternative technologies must be used in order to minimise agricultural land take, unless the developer can provide robust evidence ruling out the use of alternative technologies.